

APPENDIX B.6 – NUTRIENT TRADING DOCUMENTATION

POTOMAC Basin: Nitrogen Credit Ledger

Compliance Year:	2019	Credit Forecasts		Preliminary Use of Credits				Credit Exchange (Pounds)			
Facility Name	Delivered WLA	Expected Load	Expected Credits	In-Bubble Exchange	Private Exchange	WQIF-Held Credits	Expected Net Credits		Class A Sales	Class A* Purchases	Class B Sales**
								PRICE:	\$ 0.08	\$ 3.82	\$ 0.02
The Exchange (group)	2,612,604	1,932,970	679,634	-	(2,924)	(24,365)	652,345		496,157	(11,665)	167,853
ACSA-Fishersville	4,873	1,900	2,973	(2,973)	-	-	-		-	-	-
ACSA-Greenville	1,424	512	912	(479)	-	-	433		433	-	-
ACSA-Harriston	1,025	209	816	(816)	-	-	-		-	-	-
ACSA-Middle River	8,284	3,877	4,407	-	-	-	4,407		4,407	-	-
ACSA-Mt. Sidney	854	1,346	(492)	492	-	-	-		-	-	-
ACSA-Stuarts Draft	2,436	606	1,830	-	-	-	1,830		1,830	-	-
ACSA-Vesper View	1,025	563	462	(462)	-	-	-		-	-	-
ACSA-Weyers Cave	1,462	5,700	(4,238)	4,238	-	-	-		-	-	-
Alexandria Renew Ent.	493,381	371,223	122,158	-	-	-	122,158		91,620	-	30,538
Arlington Co.	365,284	237,554	127,730	-	(2,625)	-	125,105		125,105	-	-
Berryville	5,373	3,377	1,996	-	-	-	1,996		1,900	-	96
Broadway Regional	5,601	4,719	882	-	-	-	882		-	-	882
Fairfax Co-Noman Cole	612,158	470,822	141,336	-	(25)	-	141,311		127,128	-	14,183
FCWSA-Vint Hill	579	244	335	-	-	-	335		-	-	335
Front Royal	29,725	25,359	4,366	-	-	-	4,366		4,000	-	366
FWSA-Opequon	31,681	17,183	14,498	-	-	-	14,498		-	-	14,498
FWSA-Parkins Mill	15,837	6,533	9,304	-	-	-	9,304		-	-	9,304
HRRSA-North River	55,746	38,191	17,555	-	-	-	17,555		15,000	-	2,555
KGCSA-Dahlgren S.D.	9,137	5,025	4,112	(427)	-	-	3,685		-	-	3,685
KGCSA-Fairview Beach	1,827	731	1,096	-	-	-	1,096		-	-	1,096
KGCSA-Purkins Corner	1,096	1,523	(427)	427	-	-	-		-	-	-
Leesburg	97,458	32,898	64,560	-	(274)	(24,365)	39,921		-	-	39,921
Loudoun Water- Broad Run	119,264	48,953	70,311	-	-	-	70,311		57,884	-	12,427
Luray	8,187	2,533	5,654	-	-	-	5,654		5,654	-	-
Massanutten PSC	6,030	2,975	3,055	-	-	-	3,055		-	-	3,055
Merck	4,824	14,473	(9,649)	-	-	-	(9,649)		-	(9,649)	-
MillerCoors LLC	18,091	18,091	-	-	-	-	-		-	-	-
Mt. Jackson	2,900	2,237	663	-	-	-	663		-	-	663
Purcellville	13,157	7,894	5,263	-	-	-	5,263		2,632	-	2,631
PWCSA-HL Mooney	219,280	178,165	41,115	-	-	-	41,115		28,781	-	12,334
Stafford Co-Aquia	73,093	67,063	6,030	-	-	-	6,030		4,462	-	1,568
Stoney Creek	2,891	2,814	77	-	-	-	77		-	-	77
Strasburg	5,134	6,548	(1,414)	-	-	-	(1,414)		-	(2,016)	602
UOSA	302,607	300,006	2,601	-	-	-	2,601		-	-	2,601
VA Am. Water PW Sec. 1	42,029	23,984	18,045	-	-	-	18,045		10,827	-	7,218
VA Am. Water PW Sec. 8	42,029	23,984	18,045	-	-	-	18,045		10,827	-	7,218
Waynesboro	6,822	3,155	3,667	-	-	-	3,667		3,667	-	-
Purchase by Eastern Shore	-	-	-	-	-	-	-		-	-	-

*** For this Compliance Year, 0% of all Class A Credit Purchases are expected to be satisfied using Class B Credits.**

**** Class A and Class B Credit Sales are estimates only; actual Credits generated—and the resulting sales prices—may vary from estimates based on Delivered Loads in the Compliance Year.**

Owner Bubble: Frederick-Winchester Service Authority

The facilities listed below have received an aggregated mass load limit pursuant to 9 VAC 25-820-70, Part 1.B.2., which is also referred to as an “owner bubble”. Accordingly, compliance is determined solely on an aggregate basis rather than by comparison of individual facility loads with respective individual WLAs.

The “Credit Transferred within Bubble” section of each table forecasts the use of Credits within the owner bubble during each Compliance Year, and must necessarily sum to zero. The specific Credit transfers shown in this table are provided for internal planning purposes only and, accordingly, are not binding and may change based on the actual performance of individual facilities within the bubble.

Expected Net Credits for an owner bubble may be either positive or negative. If Expected Net Credits is positive, the owner may pledge a percentage of such Credits to the Exchange. If Expected Net Credits is negative, Net Expected Credits identifies the number of Credits that must be purchased to comply with the aggregate Delivered WLA of the bubble.

NITROGEN Credits		Exchange 5-year Planning Period					Future Projections		
Credits Transferred within Bubble		2019	2020	2021	2022	2023	2024	2025	2026
Opequon		-	-	-	-	-	-	-	-
Parkins Mill		-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-
TOTAL (must sum to 0)		-	-	-	-	-	-	-	-
Credits Available outside Bubble		2019	2020	2021	2022	2023	2024	2025	2026
Opequon		14,498	13,722	10,546	11,678	11,199	10,799	10,431	10,000
Parkins Mill		9,304	8,473	6,363	5,884	5,596	5,212	5,020	4,732
		-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-
Expected Net Credits		23,802	22,195	16,909	17,562	16,795	16,011	15,451	14,732
Class A Sales (Purchases)		0	0	0	0	0	0	0	0
<i>Expected Class B Credits</i>		<i>23,802</i>	<i>22,195</i>	<i>16,909</i>	<i>17,562</i>	<i>16,795</i>	<i>16,011</i>	<i>15,451</i>	<i>14,732</i>
<i>WQIF-Held Credits</i>		<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>

PHOSPHORUS Credits		Exchange 5-year Planning Period					Future Projections		
Credits Transferred within Bubble		2019	2020	2021	2022	2023	2024	2025	2026
Opequon		-	-	-	-	-	-	-	-
Parkins Mill		-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-
TOTAL (must sum to 0)		-	-	-	-	-	-	-	-
Credits Available outside Bubble		2019	2020	2021	2022	2023	2024	2025	2026
Opequon		3,031	2,887	2,405	2,298	2,190	2,101	2,019	1,922
Parkins Mill		1,110	938	708	601	537	451	408	343
		-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-
Expected Net Credits		4,141	3,825	3,113	2,899	2,727	2,552	2,427	2,265
Class A Sales (Purchases)		0	0	0	0	0	0	0	0
<i>Expected Class B Credits</i>		<i>4,141</i>	<i>3,825</i>	<i>3,113</i>	<i>2,899</i>	<i>2,727</i>	<i>2,552</i>	<i>2,427</i>	<i>2,265</i>
<i>WQIF-Held Credits</i>		<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>

NITROGEN FACILITY SUMMARY

FWSA-Opequon

POTOMAC Trading Basin

Year	Credits Purchased	Credits Sold
2019	0	14,498
2020	0	13,722
2021	0	10,546
2022	0	11,678
2023	0	11,199
2024	0	10,799
2025	0	10,431
2026	0	10,000

Loading & Credit Summary								
	2019	2020	2021	2022	2023	2024	2025	2026
Planning Period								
Design Flow (mgd)	12.60	12.60	12.60	12.60	12.60	12.60	12.60	12.60
Projected Flow (mgd)	7.75	8.10	8.40	8.70	9.00	9.25	9.48	9.75
Projected Avg. Annual Concentration (mg/L)	2.80	2.80	2.80	2.50	2.50	2.50	2.50	2.50
Discharged Load (end of pipe)	66,089	69,073	71,632	66,241	68,525	70,429	72,180	74,236
Delivery Factor	0.26	0.26	0.21	0.21	0.21	0.21	0.21	0.21
Expected Load	17,183	17,959	15,043	13,911	14,390	14,790	15,158	15,589
Delivered WLA	31,681	31,681	25,589	25,589	25,589	25,589	25,589	25,589
Expected Credits (delivered)	14,498	13,722	10,546	11,678	11,199	10,799	10,431	10,000
Transfers In (Out) within Owner Bubble	0	0	0	0	0	0	0	0
Transfers In (Out) from Private Exchange	0	0	0	0	0	0	0	0
WQIF-Held Credits	0	0	0	0	0	0	0	0
Expected Net Credits	14,498	13,722	10,546	11,678	11,199	10,799	10,431	10,000
Class A Credit Sales (Purchases)	0	0	0	0	0	0	0	0
Expected Class B Credits	14,498	13,722	10,546	11,678	11,199	10,799	10,431	10,000

NITROGEN FACILITY SUMMARY

